

Additional Practice

Investigation 1

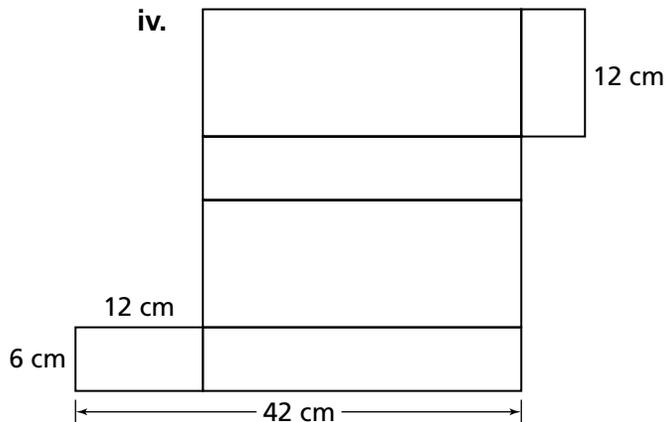
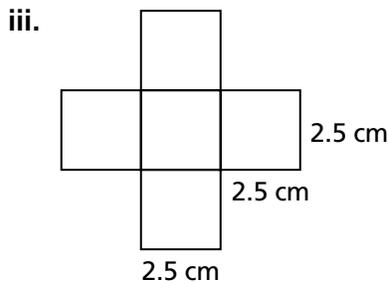
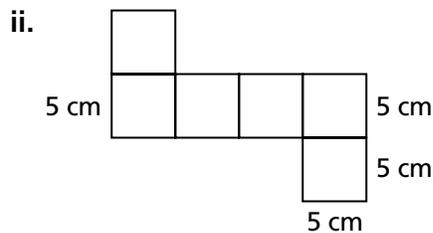
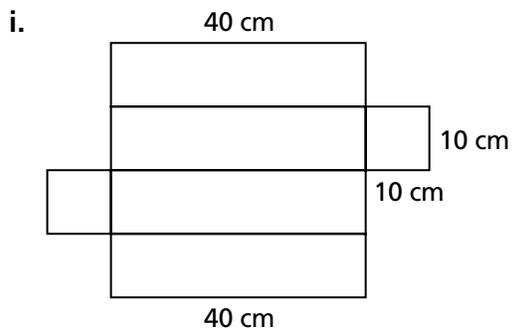
Filling and Wrapping

1. At the bottom of the page are four nets that will fold into rectangular boxes. Net *iii* folds into an open box. The other nets fold into closed boxes. Answer the following questions for each net.

a. What are the dimensions of the box that can be made from the net?

b. What is the surface area of the box?

c. What total number of unit cubes would be needed to fill the box?



Additional Practice *(continued)***Investigation 1****Filling and Wrapping**

2. a. Gina has a sheet of cardboard that measures 9 feet by 6 feet. She uses scissors and tape to make the entire sheet of cardboard into a closed box that is a perfect cube. What is the surface area of the box?
- b. What is the length of each edge of the box? Explain your reasoning.
- c. How many unit cubes would it take to fill the box?
3. a. Bill has a sheet of cardboard with an area of 10 square feet. He makes the entire sheet of cardboard into a closed rectangular box. The four sides of the box have the same area, and the two ends have the same area. The area of each of the four equal sides is twice the area of each end. What is the area of each face of Bill's box?
- b. What are the dimensions of Bill's box?
- c. How many unit cubes would it take to fill the box?